TWO NEW SPECIES OF DACTYNOTUS RAFINESQUE FROM THE EASTERN UNITED STATES

(HOMOPTERA: APHIDIDAE)

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In this paper two new species of *Dactynotus* Rafinesque from the eastern portion of the United States are described. For an explanation of the terms, methods of clearing and mounting, etc., see Olive (1963).

The author expresses his appreciation to M. D. Leonard, D. D. Leonard, C. E. Olsen, and J. T. Katsanos for aid in obtaining the specimens of one species.

A mimeographed table of measurements for both species in this paper is available upon request.

Dactynotus leonardi n. sp.

(Figs. 1, 3, 4)

Alate Viviparous Female

Color of living specimen.—Entire body dark brown to blackish. Cauda pale yellow.

Color of cleared specimen.—Head and thorax dusky, abdomen pale. Antennal segments I, II, and base of III dark dusky; sometimes I slightly darker than II and base of III. Remainder of antennae dark. Rostral segments III and IV + V dark dusky to dark, basal segments dusky. Legs with basal half of femora pale, distal half dark dusky to dark. Basal tibiae dark dusky, shading to dark apically. Tarsi and extreme tips of tibia slightly paler than apical half of tibiae. Marginal sclerites pale dusky to dusky. Antesiphuncular sclerites broken and dusky. Postsiphuncular sclerites entire and dusky. Scleroites concolorous with marginal sclerites. Siphunculi uniformly dark dusky to dark. Cauda, genital plate, and anal plate concolorous with, or slightly paler than, marginal sclerites.

Morphological characters.—Length of body, 2.34–3.59. Antennal segment III with 33–51 sensoria. Length of hairs on vertex, 0.03–0.045; on antennal segment III, 0.03–0.045. Rostrum attaining or slightly surpassing second coxae. Tarsal segment I with 5 hairs. Abdominal tergite VIII with 4, occasionally 3 hairs. Lateral tubercles small, clear, slightly convex, and usually not occurring on all marginal sclerites of a given specimen. (Few specimens of a population may be lacking tubercles altogether.) Siphunculi with apical third reticulated. Cauda long, narrow, and bearing 14–23 hairs; most specimens average about 17 or 18, but a few have several small, secondary, dorsal hairs.

Apterous Viviparous Female

Color of living specimens.—Similar to that of alate viviparae.

Color of cleared specimens.—Head dusky. Remainder of body pale to pale dusky. Antennae similar to those of alate viviparae. Legs with slightly less than basal two-thirds of femora pale, distal third dark. Tibiae with basal half dusky to dark dusky, shading to dark distally. Tarsi and extreme tip of tibiae slightly paler than rest of tibiae. Marginal sclerites appearing as pale dusky to dusky spots at

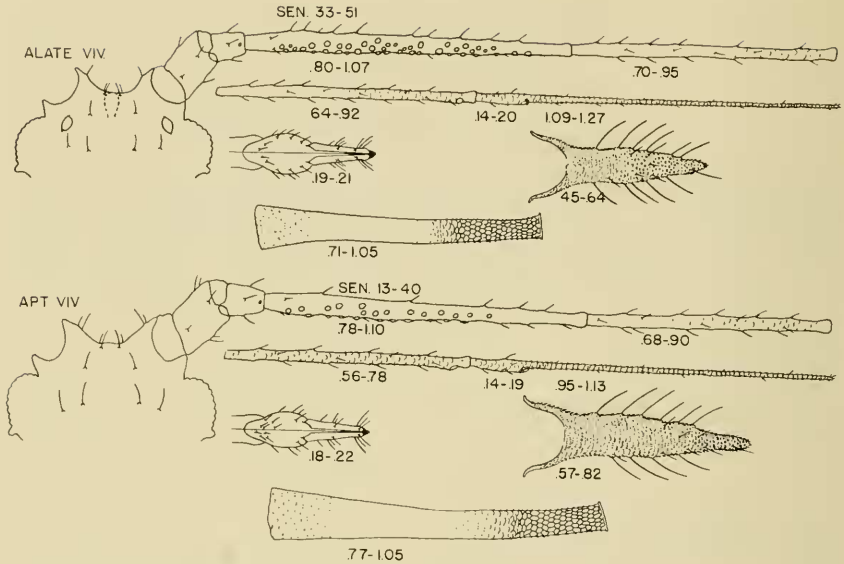

Fig. 1, *Dactynotus leonardi* n. sp.

bases of marginal hairs and marginal tubercles. Otherwise, coloration similar to that of alate viviparae.

Morphological characters.—Length of body, 2.41–3.35. Antennal segment III with 13–40 sensoria. Length of hairs on vertex, 0.04–0.06; on antennal segment III, 0.03–0.045. Rostrum attaining third coxae. Marginal tubercles clear, small, slightly convex, seldom found on all marginal sclerites in a given specimen. Cauda long, narrow, bearing 13–22 hairs; average number about 17–18, with several secondary, dorsal hairs.

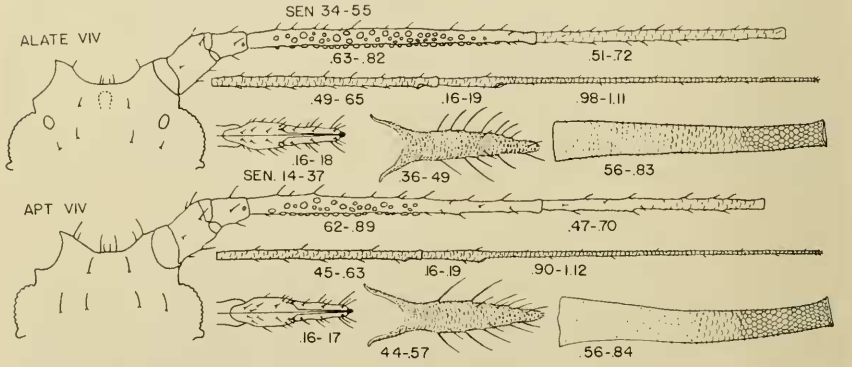

Fig. 2, *Dactynotus reynoldensis* n. sp.

Collections.—On *Rudbeckia hirta* L.: Ridgewood, N. J., July 1962, D. D. Leonard, coll. West Nyack, N. Y., 1961, C. E. Olsen, coll.

On *Rudbeckia serotina* Nutt.: Hadley, Mass., 6-12-62, 7-17-62, J. T. Katsanos, coll.

Types.—Holotype: Alate viviparous female. Hadley, Mass., 6-12-62, on *Rudbeckia serotina* Nutt. J. T. Katsanos, coll. Deposited in the United States National Museum. Paracolonotypes: (Same data as holotype.) There are 4 slides deposited in the collection of the author. Paratypes: There are 31 slides from Hadley, Mass., Ridgewood, N. J., and West Nyack, N. Y., deposited in the collection of the author.

Type-locality.—Hockanum area, Hadley, Mass.

Chief distinguishing characters.—Body color dark brown to blackish. Cauda pale, very long and narrow. Tarsal segment I with 5 hairs. Abdominal tergite VIII with 4 or occasionally 3 hairs. Lateral tubercles small, clear, convex, and not always present on all marginal sclerites. Siphunculi uniformly dark.

Notes.—Other species of *Dactynotus* recorded from *Rudbeckia* spp. are *D. ambrosiae* (Thomas) and *D. rudbeckiae* (Fitch). *Dactynotus leonardi* differs from these two species by having lateral tubercles. Because of the similarity of color *leonardi* could be confused easily with *ambrosiae*. Since *rudbeckiae* is orange-red and *leonardi* is dark brown to blackish, these two are easily distinguished in the field. Superficially, *leonardi* is similar to *Dactynotus chrysopsidicola* Olive. *D. chrysopsidicola* is a much smaller aphid with very dark sclerotization, and occurs almost exclusively on *Chrysopsis* spp. *D. leonardi* also resembles *D. nigrotuberculatus* Olive in size and shape. However, *nigrotuberculatus* is orange-red in life, and the marginal tubercles are dark instead of clear.

This species is named in honor of Dr. Mortimer D. Leonard.

Dactynotus reynoldensis n. sp.

(Figs. 2, 5, 6)

Alate Viviparous Female

Color of living specimens.—Head, thorax, and abdomen dark orange-red. Antennae, legs, and siphunculi appearing blackish, cauda pale.

Color of cleared specimens.—Head and thorax dusky, abdomen pale. Antennal segments I, II, and base of III dark dusky, remainder dark. Sometimes entire antenna almost uniformly dark. Rostral segments III and IV + V dark dusky to dark; basal segments slightly paler. Legs with basal half of femora pale, distal half dark. Tibiae dark except apical tip which is slightly paler. Tarsi concolorous with apical tibiae. Marginal sclerites dusky. Antesiphuncular sclerites broken and dusky. Postsiphuncular sclerites entire and dusky. Scleroites concolorous with, or slightly paler than, marginal sclerites. Siphunculi uniformly dark. Cauda, genital plate, and anal plate dusky, or slightly darker than abdomen.

Morphological characters.—Length of body, 1.84–2.34. Antennal segment III with 34–55 sensoria. Length of hairs on vertex, 0.025–0.04; on antennal segment

III, 0.025–0.035. Rostrum attaining or slightly surpassing second coxae. Tarsal segment I with 5 hairs. Abdominal tergite VIII with 2 hairs. Lateral tubercles absent. Siphunculi with slightly more than apical third reticulated. Cauda bearing 9–18 hairs.

Fig. 3, Apterous viviparous female of *Dactynotus leonardi* n. sp.; Fig. 4, Alate viviparous female of same. Fig. 5, Apterous viviparous female of *Dactynotus reynoldensis* n. sp.; Fig. 6, Alate viviparous female of same.

Apterous Viviparous Female

Color of living specimens.—Similar to that of alate viviparae.

Color of cleared specimens.—Head dusky. Remainder of body pale to pale dusky. Antennae similar to those of alate viviparae. Legs with slightly more than basal half of femora pale, remainder of legs dark dusky to dark. Apices of tibiae and tarsi slightly paler than more proximal portion of tibiae. Marginal sclerites appearing as pale dusky to dusky spots at bases of marginal hairs. Antesiphuncular and postsiphuncular sclerites and scleroites concolorous with marginal sclerites. Otherwise, coloration similar to that of alate viviparae.

Morphological characters.—Length of body, 1.60–2.21. Antennal segment III with 14–37 sensoria. Length of hairs on vertex, 0.04–0.05; on antennal segment III, 0.03–0.035. Rostrum attaining third coxae. Cauda bearing 12 to 17 hairs. Cauda very long and narrow, width at constricted area $\frac{1}{7}$ entire length of cauda.

Collections.—On *Coreopsis major* Walt.: Reynolda Gardens of Wake Forest College, Winston-Salem, N. C., 7-14-62, 6-20-63, 6-21-63, 6-29-63, 7-20-63; Saurtown Mountain, N.C., 7-6-63.

Types.—Holotype: Alate viviparous female. Reynolda Gardens of Wake Forest College, Winston-Salem, N.C., 7-14-62, on *Coreopsis major* Walt. A. T. Olive, coll. Deposited in the United States National Museum. Paracolonotypes: (Same data as holotype.) There are 16 slides deposited in the collection of the author. Paratypes: There are 25 slides deposited in the collection of the author.

Type-locality.—In a small patch of woods across the street from the Faculty Apartments of Wake Forest College, Winston-Salem, N.C.

Chief distinguishing characters.—Body color dark orange red. Tibiae of alate and apterous forms uniformly dark except for extreme apices which are slightly paler. Cauda pale to dusky, very long and narrow. Tarsal segment I with 5 hairs. Abdominal tergite VIII with 2 hairs. Lateral tubercles absent. Siphunculi uniformly dark.

Notes.—To my knowledge, this is the only aphid of the genus *Dactynotus* which has been recorded from *Coreopsis* spp. except *D. ambrosiae* (Thomas). The two species may be distinguished most readily by the live color. *D. reynoldensis* is dark orange-red, whereas, *ambrosiae* is red brown to brown.

Two other "bright red" aphids with which *reynoldensis* may be confused are *D. rudbeckiae* (Fitch), and *D. nigrotuberculatus* Olive. The siphunculi of *reynoldensis* are uniformly dark, whereas those of *rudbeckiae* are pale at the bases. *D. reynoldensis* is much smaller than *nigrotuberculatus* and has 2 hairs on abdominal tergite VIII instead of 4–6. *D. reynoldensis* lacks lateral tubercles, while *nigrotuberculatus* has prominent dark ones.

Literature Cited

Olive, A. Thomas. 1963. The genus *Dactynotus* Rafinesque in North Carolina (Homoptera: Aphidae). Misc. Publ. Ent. Soc. Amer. 4(2): 31–66.